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DECEMBER COVER—Dale S. Phillips, Edwin Low, and Lynette Blake, Indiana State Teachers College art students are shown discussing a section of the Arts and Crafts of Norway exhibition held recently in the college Art Gallery.



The *Teachers College Journal*

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An Educated Citizenry

We in America are dedicated to the principle that an educated citizenry is basic to the perpetuation and improvement of our way of life. We believe that through this principle comes the best guarantee that we will continue to enjoy the freedoms that have made us great. We believe these things so strongly that in every state in the Union school attendance is compulsory. And, although from time to time the question "Who should be educated?" is raised, we continue to answer it, "All of the children of all of the people."

Accepting, then, these three principles—an educated citizenry, compulsory school attendance, and universal education—what is the school's responsibility to each child who attends? This question has no easy answer. When the answer is attempted in terms of specific skills and attitudes and understandings which educated citizens should possess, it becomes even more difficult. The term, "educated citizenry," means many things to many people. However, at least two generalizations with reference to the school's responsibility seem to be valid.

1. The school should provide educational experiences in which each child can be successful. Successful participation in tasks set by the school is essential to the learning of those things the school tries to teach. It follows, then, that since an educated citizenry is important enough that we require all children to attend school, there must be something there which each of them can learn regardless of his capacity for learning or the speed with which he can learn. It is difficult to think of anything more undemocratic or more stultifying to individual development than to say to a child, "You must go to school," and then to say to him, "There is nothing here that you can learn"—and add, "but you must learn it anyway."

Surely the school can be expected to provide learning experiences which help the child grow and develop both personally and socially. It must not foster conditions which make him go outside school-approved activities for his satisfactions, so that his learning becomes negative, anti-social—so that, in reality, he learns to dislike teachers,

subjects, books, and school in general.

2. The school should provide educational experiences in which each child can find challenge. This is true regardless of the capacity of the child for school work. He must be exposed, lead, encouraged (he can rarely be forced) to stretch toward the practical limits of his capacity.

For the child who has high capacity in any area to have to loaf along because he must "stay with his class" is both a deteriorating experience for him and a loss to society. It is little if any better to give him more of the same thing to do just to keep him busy. Without challenge, the potential of these children will never be realized.

The ideal of an educated citizenry does demand that all of the children of all of the people attend school. It also demands that each child experience the success that is necessary to learn at his level. And, it demands that each child be provided the opportunity to "burgeon out all that is within him."

J. E. Cobb

Problems Facing the Professional Educator

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There are many problems that confront those who are concerned with directing the education of children and youth today. Perhaps one would not be far wrong in suggesting that most of them are related in one way or another to the phenomenon of change. We cannot claim, of course, that change is bringing a greater number of perplexing problems to the teacher, the supervisor, the principal, the superintendent, the college professor, or the college president than to the farmer, the business man, and those engaged in other professions. Still it does appear, upon some reflection that this is true; for it seems that education, more than anything else, is ultimately affected by every change in any aspect of life.

The alert professional leader faces changes occurring so rapidly that he is hard pressed to keep up with them. Each change brings new conditions and, to some extent, new problems. It is of almost crucial importance that the professional educator determine which of these are significant and which need little attention. Some that stand out may actually be of only passing interest. Others not so spectacular may be of real concern in indicating directions education needs to take.

It is our purpose here to pin-point only two major areas in which the changes of the last few decades have heaped burdens upon the shoulders of the professional leader, the effects of mass education and the effects of technology. There are doubtless others which could be discussed. Still others may take precedence for some readers because, though not crucial, they demand immediate decisions and actions.

Mass Education

Free public education was established in the United States more than a century ago. The leaders then, like leaders today, argued that free public educa-

tion was imperative for democratic life. Unfortunately, in the past century we have been slow in bringing about the basic changes needed in the school curriculum to make it suitable for teaching "little democrats." Even as late as fifty years ago the curriculum remained much as it was in the middle ages when only the offspring of the feudal and urban aristocrats went to school.

It is not strange, considering the rapidity of change during the first half of the twentieth century, that education is still a lagging social institution. The professional educator agrees with his critics: education is not sufficiently adapted to present-day needs. At the same time, the critic should be reminded of the fact that the public has often been very laggard in giving sufficient support to the educator, who often must work against the odds of public apathy or misunderstanding in his attempt to improve the educational opportunities for children and youth.

Mass education has brought difficulties often little comprehended by the layman and often frustrating to the educator. What are they?

Mass education and individual needs.

As a nation we have accepted in principle the concept of universal education. As a result, we have seen a growing recognition of the dignity and worth of every human being. One great problem facing the professional educator today is that of providing education for all and yet of furnishing the right educational experiences for each individual student. Thus far we have in no wise found the answer. For economy's sake we must teach in classes of twenty, thirty, or forty. For humanity's sake we must recognize and provide for the wide differences in intelligence, talents, and interests in our students.

Perhaps we have been more successful on the "mass" side than on the

"individual" side. At any rate, we have created a smoothly running educational machine. Our critics say that we frown on independence of thought and action in our pupils because conformity makes groups easier to handle. They exaggerate, but they are not wholly wrong. We **must** do more for the individual and do more to further individuality, independence of thought, and creativity. If it were as easily done as said, of course, we would be closer to achieving this objective. But we cannot excuse ourselves by saying that the problem is difficult. It exists, it must be solved, and it **is** up to us.

Increased enrollment and housing

problems. The school year of 1957-58 is the thirteenth consecutive year to show an increase in the nation's total school and college enrollment. This year we reached a **new all time** peak of approximately 43,135,000. About one out of every four persons in the United States is attending school or college.

In the period between 1950 and 1957, more school buildings were erected in the United States than in the twenty years between 1930 and 1950. Now in 1957 many school corporations and college boards find themselves further behind in meeting building needs than they were in 1950. Authorities studying the school housing problem estimate that it will be 1975 before building can catch up with enrollment.

The problems for the professional educator posed by this condition are numerous. Between thirty and forty per cent of all teachers will be working in overcrowded classrooms. Many children will be able to attend school for only half-day sessions. Getting the money for new buildings and equipment—particularly with present inflationary costs—is not easy when the taxpayer already feels overburdened. Yet such buildings

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Saying and Doing in a Methods Course for Prospective Teachers

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Pre-service teacher preparation aims at the establishment of a degree of proficiency in the skill of teaching before placement. Such preparation is sometimes criticized because instruction in teaching does not exemplify the practices recommended. This is the report of an attempt to (a) exemplify and evaluate a recommended practice in a general methods course and (b) vitalize theoretical generalizations and principles associated with problems of classroom management.

Orientation. One hundred and three graduate students were enrolled in a general methods course required for all seeking secondary teaching credentials. Each student held a bachelor's degree with a specialization in a major subject-matter area and had completed professional study in educational history, psychology and sociology. Within the course, students previously had identified social trends and indicated implications of these trends for classroom instruction. They had also completed class analysis, which required the collecting and interpreting of personnel data, and made psychological observations of learning situations in various public schools. Later, and prior to their student teaching experience, students would relate scholarship to method in organizing instructional materials, selecting and arranging subject-matter in the development of courses of study and resource units. A textbook which presented suggestions and principles for use in connection with classroom tasks had been read by the students. Desire to vitalize the content of this text by demonstrating a recommended practice led to the following experiment.

The Undertaking. Instead of a teacher-made examination based upon the textbook. Students were asked to act upon and to evaluate these generalizations previously verbalized in class:

1. "When students jointly select a problem and the information essential to its solution, there is greater retention of the information than when students are arbitrarily assigned the problem and independently acquire information essential to its solution."

2. As opposed to teacher-made tests, "there is less anxiety, surface-conformity, dependency, hostility and cheating in a test jointly prepared by students and teacher."

3. "In the overriding competition for marks, students are always made uneasy by any instructional system which they do not fully understand."

4. "Professional thinking is situational. Student interpretations of readings are more likely to be realistic and meaningful when students share situations in small groups, applying readings to the problems at hand."

5. "Beginning students in education without teaching experience have a very large capital of an exceedingly practical sort in their own experience which can be useful in the identification of teaching problems of importance to themselves as future teachers."

Procedure. Students were randomly assigned to one of twelve groups. Each group was instructed to construct a problem situation suggested by the topic of a designated chapter in the textbook and to select information presented in the chapter which would be essential to the solution of the problem. Students were expected to share situations real to themselves: "Draw from a picture in your mind and select pertinent information, i.e., that which contains useful, significant, 'must know', ideas, principles that you expect to use in your classroom."

At the end of the fifty-five minute class period, each group submitted in writing a statement of a composite problem situation and a list of information necessary for its solution. During an additional session spokesmen from the groups presented to the class respective problems depicting situations related to one of the six textbook topics. It was announced that these problems would constitute the test to be taken at the third session. Scores on the test were dependent upon the recall of those principles stated in the text which were applicable to the problem situation. Performance on each problem was scored separately in order to test the hypothesis that recall of textbook information would be greater when students jointly selected a problem situation and jointly considered information essential to its solution than when they were merely advised of the problem in advance and independently selected information from the textbook. Median scores made under the two conditions were obtained for each problem. In addition, an unsigned reactionnaire for use in appraisal of the undertaking and assumptions with which it dealt was completed by the students.

Results and Evaluation. Although median scores which were earned after joint selection of problem and joint review of information in the appropriate chapters of the textbook exceeded slightly those scores earned through independent study, the difference was not statistically significant. Interestingly, there was less range in those scores made under the former condition, suggesting that group effort resulted in more cohesive responses, possibly raising scores for those who would have been in the very low position and restricting scores for those who would have been in exceptionally high positions. With respect to evaluation of the

other assumptions as they applied to students' own experience in the undertaking, students expressed themselves as follows:

a. Eighty-one per cent of the students indicated that they experienced less anxiety, surface-conformity, dependency, hostility, and cheating in the completion of the test which they themselves had helped to plan.

b. A minority of the students expressed uneasiness with the jointly prepared test, indicating they were either "confused and troubled at the time" or "felt less incentive to study."

c. Most of the students (87 per cent) felt that they would be more likely to act in accordance with the information jointly selected as essential than upon that information independently evaluated. Further, eighty-one per cent felt that the content of the book which was discussed in small groups was more meaningful than that read independently. Eight-two per cent indicated that they would use the technique in their own class although most would modify it. Among the most frequent criticisms of the procedure as it was conducted were these:

1. need for better organization of the undertaking, including advanced preparation for planning the activity and for establishing standards of performance expected in small group participation

2. need for more time, especially for small group discussions and study in order that consensus could be reached rather than agreement because of pressure for time

3. need for total class agreement on essentials for problem solution and for opportunity to select such essentials from sources other than the single textbook

d. Problems selected by students who had no teaching experience indicated their ability to identify these typical problems of instruction:

1. planning lessons to compete with other demands upon students.

2. ensuring that extension of the class-room into the community results in an educational experience as well as an entertaining one

3. furthering democratic values in high school organizations

4. selecting and using a wide variety of instructional materials

5. establishing behavior norms among students who hold different cultural values

6. evaluating individual and group learning experiences

e. Students in the class unanimously favored conducting similar demonstrations to test recommended practices which might hold promise for the secondary school.

It is felt that while the undertaking dealt directly with techniques and students did react to what they saw succeed and fail in an empirical way, opportunity for relating the practice to theory was present. Discussion of the findings and criticism of the process in terms of educational principles such as self-control, motivation, democratic procedures and other abstractions illuminated previous theoretical instruction. The experience increased the participants' understanding of principles appropriate for their continuing growth as teachers and revealed the need for additional skill and understanding.

Current Problems of Secondary Education

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In 1936 a committee of the National Association of Secondary School Principals made a report on the principal problems or issues of secondary education in the United States. Emphasis was given to the issues of who should be given the opportunity for secondary schooling, what type of program should be offered, and what kind of organization and administration is needed. The issues listed by the committee are yet to be resolved; the passage of time has served neither to erase these problems

nor to bring them any closer to the solution. Indeed, the years seem but to have sharpened the issues and to have brought new ones into the picture.

Today much discussion rages about the "great debate" of American education, but in reality we should speak of the "great debates" for there are many and varied issues and problems confronting us. The public high school is one of the major arenas of these debates, and any discussion of the purposes and evaluation of the high school

usually results in claim and counter-claim, accusation and counter-accusation, and—alas!—name-calling, scapegoating, and a host of other less desirable activities.

To the list of issues already cited several new ones should be added, and it is toward three of these in particular that I would direct your attention. They concern (1) the place and importance of scholarship, (2) the nature and extent of academic freedom in the high school, and (3) the place of religious instruc-

tion in the public schools. Each of these is worthy of particular consideration. It is the purpose of this article to define and examine each—not to find solutions to them.

First the question of the importance of scholarship is one we cannot avoid. One can hardly pick up a current magazine without being confronted with some bold proclamation about the scholarship of the high school student of today. All sorts of ideas are expressed about the high scholastic standards of the high school or its lack of them, and the much-maligned professional educator is brought in for his usual role of scapegoat.

But the question is really much deeper than these surface indications. The concept being debated is in reality whether the emphasis in the secondary school should be solely on intellectual achievement or on the over-all growth and development of the individual. The term **adjustment** is often used to express this latter view—but, **adjustment** is a tricky word, and no small amount of care should be taken to say just what we mean. We do not refer to students' becoming social "butterflies" or to their indulging in hail-fellow-well-met social behavior. We **do** refer to the individual's capacity to face the problems of his life intelligently, purposefully, and courageously without becoming a slave to his own uncontrollable emotions.

When **adjustment** is so defined—as it should be—the issues become more manageable in our thinking. No longer is the problem one of intellectual development **vs.** adjustment. The problem is one of point of attack; should we strive for intellectual development in order to assure adjustment, or should we seek adjustment and thereby assure intellectual growth?

Such a redefinition of the problem does not solve or abolish it, but it does make it easier to deal with. And in this, as in all problems of secondary education, our most crying need is to develop areas of agreement rather than to further the breach in varying opinion.

But we should not be lulled into believing that this is just an academic question. For example, the view we hold will determine the balance between the classical and the contemporary studies in the high school program, the place given to vocational training, and the extent to which students are given opportunity and responsibility in planning their programs.

No immediate solution appears possible for this great issue. There seems no "middle road" which is acceptable to both extremes. But in more careful definition of the issue, in clearer thought about it, and in better understanding of the implications to the high school program, we can hope to move in the direction of solutions.

The problem of the extent and nature of academic freedom has also proved to be one of the major problems to secondary education. Although we usually think of academic freedom as a problem of higher education, it is also a problem in the high school. At the secondary school level the problem is even sharper because of the lack of maturity of the students.

The climate of fear which results from the cold war has helped to heighten this problem. Not only have old questions been re-asked and re-examined, but new shadows of suspicion have been created and non-conformity has become a luxury that few ordinary citizens and practically no teachers can afford.

Academic freedom is the freedom of the teacher to learn, to teach, and to express his opinion of his subject and of the world of learning. It is also the freedom of the student to pursue his quest for knowledge regardless of whether it clashes with social belief or teacher opinion.

At one extreme are those who maintain that there should be no academic freedom—that all study and teaching must conform to pre-determined codes or ideals. These people embrace the idea expressed by Napoleon, "I feel the system of education should regulate the

political and moral opinions of the citizens."

At the other extreme are those who support absolute and complete freedom to teach and learn. This view is epitomized by Jefferson's often-quoted statement, "If there be any among us who wish to dissolve this union, or to change its republican form, let them stand undisturbed, as monuments to the safety with which error of opinion may be tolerated where reason is left free to combat it."

In general, people within the education profession have supported the side of full academic freedom, and such professional organizations as the National Education Association and the American Association of University Professors have kept a constant guard against infringements upon this freedom. But outside the teaching profession other forces have made moves to restrict this privilege. These forces have moved in direct and specific attacks. Among the more prominent of these efforts have been censorship of books and courses, requirements of loyalty oaths, and restrictions on the political activities of teachers. Each of these restrictions to academic freedom could be argued indefinitely as to its merits and its dangers.

This much is certain, the issue of academic freedom is not a simple one to be answered with a "yea" or "nay." The following questions serve to demonstrate the complexity of the issue: Is academic freedom absolute and limitless? Does it vary according to the level of development of the students? Does it vary according to local conditions? Are there obligations—such as patriotic duty—which take precedence over academic freedom?

I do not attempt an answer to these questions: I use them to show the difficulty of finding wise solutions to the problem of academic freedom.

Finally, the place of religious instruction in the secondary schools has been re-opened to consideration. Traditionally the American people have supported the idea of separation of church and state which has led to a secular school

system. However, they have also given general support to the moral and religious education of the young. We have in the past been able to hold to these two ideas without getting them confused. Recent years have brought about several movements to establish religious education in the public schools. Powerful forces have launched campaigns on this citadel of separation of church and state. Advocates have supported a number of programs such as released school time for religious instruction, use of public school buildings for religious meeting, use of public school facilities such as buses and lunch funds for parochial schools, and teaching of moral and spiritual values in the public school.

Granting the importance of maintaining a separation of church and state, where can the line be drawn as to when

this principle is evaded? Can we accept programs such as those mentioned or must we go to the other extreme? There are other groups who carry on the constant struggle to have all vestiges of religious instruction removed from the school. Through court action, state board directives, and local action they attempt to remove even such undesigning practices as Bible reading from public school practice.

It is unfortunate that this issue continues to plague us. It would seem that after so many years some acceptable solutions could be found. However, the emotional character of the questions makes the possibility of such solution remote.

Our list could easily be extended. It is sufficient to point to these three issues of secondary education to indicate

that our high schools now face and will continue to face problems and issues. It may seem discouraging at first glance to see that old problems are continually popping up, only to be joined by newer and even more pressing issues. But this is to be expected in a dynamic society such as ours. Change is the great characteristic of our times, and where change exists, problems exist.

But in a larger sense these problems exist because we are making progress in education; and through these problems more progress will come. The issues of secondary education are in reality the stones from which a finer structure can be constructed. Problems of secondary education should not be regarded as obstacles to overcome but as opportunities to improve our system of public high schools.

Supervisory Counseling and Teacher Morale

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The experience of working with student teachers in their practice teaching classes frequently brings into focus in the supervisor's thinking the multiplicity of the problems of beginning teachers and their almost desperate need for someone with experience and wisdom to talk to about their difficulties.

In the relatively free atmosphere in which supervisor-student teacher discussions may take place, it becomes evident that not all beginning-teacher problems concern the classroom and the students. Student teachers may wonder about such personal concerns as salaries, living conditions, special problems of school systems of various sizes, and relations with faculty members and principals with whom they will work in their first job. Those who look toward lifetime teaching careers may even speculate at this stage about pension provisions, job security, and the problem of defeating loneliness, although

many beginners do not plan so far into the future.

Even if the supervising teacher were never in the classroom as an observer, the student teacher would derive considerable value from the personal counseling about these problems that the one-to-one relationship of the practice teaching situation makes possible. For some it may be the only formally-devised opportunity for real counseling in their teaching careers, for the pressure of administrative detail, the reliance on faculty meetings and bulletins for the solution of staff problems, and a failure to consider teachers as human beings in need of private, personal help have prevented many overworked superintendents and principals from engaging in regularly-planned programs of counseling of their teachers, in spite of the fact that administrators and supervisors are often the best-qualified professional counselors in a school system.

The fact that teachers' salaries are not particularly high makes it even more imperative that other factors contributing to poor teacher morale be minimized in order to retain in the profession as many as possible of the limited numbers of teachers available. There is evidence that the best way to accomplish this reduction of adverse morale factors is through regular supervisory counseling of teachers. Inasmuch as experienced teachers of real classroom competence leave the profession in considerable numbers each year and those who stay are often, because of job dissatisfaction, not optimally effective, supervisors should direct some of their attention to counseling teachers who have passed the probationary stage and are too apt to be taken for granted as reliable mechanical parts that do not need oiling to prevent friction.

It is true that teacher morale and the value of supervisory counseling have

been but little studied to date, but the secondary implications of studies of other aspects of the personnel problem point tentatively toward the following conclusions with regard to supervisory counseling and teacher morale:

1. The one-to-one counseling relationship between principal or superintendent and teacher is possibly the most effective single means of discovering and easing causes of poor teacher morale and thereby, promoting more effective teaching by strengthening and retaining good teaching staffs.

2. New teachers in a school system need the personal attention of their supervisors, not only for the solution of classroom problems, but for understanding of broad school and community policies and conventions, for co-operative faculty relationships, and for help with long range career planning. They can be counseled effectively as a part of the principal's private discussions of visitation during spring interviews regarding plans for the teacher's next year's work.

3. Counseling of teachers in the probationary years can occur as a natural part of discussions of progress made and future possibilities. Such sessions should be opportunities for the principal to find out more about the teacher's personal goals and needs, not just the occasion for criticisms of past efforts.

4. Teachers who have passed the probationary years and would too often be taken for granted are important subjects

for counseling inasmuch as such personnel are often in the process of making tentative projections of their future careers in the light of their proven ability as teachers and may be considering steps that would lead them to other school systems or out of the profession entirely. Such proven teachers need to be periodically re-evaluated for promotion and reassignment that would keep them as valuable and contributing members of the school system.

5. Teachers who have elected to stay in the school system and have demonstrated continued loyalty over a long period may feel that their talents are not being completely utilized. Principals seeking advisers for new extra-curricular activities or for new study committees may be surprised to find that these teachers, with the proper, tactful approach, may not only fill the assignment with competence, but may find in it the recognition and satisfaction of continued personal growth they have needed, after years in what they may come to consider a "rut." With added feeling of personal worth their classroom teaching may begin to take on a fresh sparkle.

6. Teachers in the years approaching retirement are just as likely to be effective instructors with good personalities as are younger members of the staff. They, also, have personal problems, however, such as the need for recognition of their work from their principal and fellow teachers, the opportunity to contribute suggestions for improvement of the school, and help (some-

times rather elementary and detailed) with such matters as planning economic readjustment for the retired years ahead.

7. Purely selfish reasons would dictate concern by principals with teacher-satisfaction. The morale of teachers must be considered because retaining them in the profession and helping them to become good teachers are primary problems in a day of short teacher supply. The morale of experienced teachers, however, is also highly important to school success, because dissatisfied younger members of this study group may leave for other jobs just when they are becoming potentially most valuable to the system. Older teachers who have stayed in the system for some time are frequently the nuclei of teacher cliques and gossip sessions. Such cliques can be obstacles to the favorable induction of new teachers and can be real handicaps to the development of school policies; their neutralization or sublimation, on the other hand, can result in positive contributions to the success of the school.

Many factors affecting teacher morale are already well known to supervisors. The systematic counseling of teachers has, to date, been a neglected means of improving morale. The application of good counseling techniques to helping members of his own staff should not only enhance the chances for success of a principal's educational program, but should reveal to him possibilities for improvement he might otherwise never have discovered.

Industrial Arts—Creative Learning

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The nature of modern education is such that it is desirable for each field to continuously assess itself and to determine the value of its objectives in fulfilling the overall objectives of gen-

eral education. Any field which does not assess itself objectively is vulnerable to criticism.

Industrial Arts Education in the public schools has a very definite mission. It

makes available to its young charges certain developmental experiences which they would not otherwise have. In theory it contends that it is a necessary part of general education. Its content is de-

rived from the technical world and consists primarily of tool and machine skills and technical information concerning the materials, products, and organization of industry.

This content alone does not justify it as a necessary component of general education. As in all general education, the significant characteristics are the changes in behavior resulting when student, content, and a specific physical environment have been brought together in intimate involvement. At this juncture the teacher plays a crucial role. It is here that the difference lies between a traditional education which seeks only mastery of content (skills and information), and a modern program which is also oriented in the direction of pupil development.

When the responsibility of industrial Arts Education is narrowed to imparting technical skill and a quantity of technical information, the full purposes and potential of the curriculum have been denied. To include such other objectives as developing social attitudes, habits of cooperation, and craftsmanship is still not adequate. On the other hand to eliminate or reduce efforts toward the fulfillment of the technical objectives is likewise misguided, for technical skill and information are the subject matter of the curriculum area.

The type of educational product which results from industrial arts instruction is directly dependent upon the manner in which the teacher brings the pupil and the content together. Traditionally the teacher develops certain project materials which are assigned to the pupil to execute. This manipulative activity is selected and planned so as to incorporate into a systematic and proper sequence specific tool operations and appropriate related information topics. When this process has been repeated enough times in cycles of increasing complexity, it is assumed that the student has achieved and that he is now, within the limits of his capacity, a worthy product of industrial arts instruction. Given an examination on skill and information he can be expected to make a presentable showing.

In this rather exaggerated description at least one element was lacking. During the whole process the student had little opportunity to wrestle with a technical problem in its entirety. At every turn where there was a choice or a decision to be made the teacher was at hand to supply the need from the wealth of his experience. If information was necessary, it could be acquired by a question to the instructor or by turning to a reference the exact pages of which had been anticipated in a thoroughly prepared information-assignment sheet.

It is this kind of industrial arts instruction that has been the butt of much of the criticism in published expression recently. The area has been indicted for its failure to encourage a creative approach in its learning activities. The central theme of the proposed solutions to remedy this distorted practice has usually included the admonition that more emphasis should be placed upon original design of the article which the student was to construct.

The criticism has sometimes been introduced by questioning the extent to which the "arts" are practiced in industrial arts education. However, "arts" is usually defined in terms stipulated by the fine arts with the esthetic element predominant. "Arts" in the curriculum area of industrial arts does include the esthetic, but it also connotes the systematic application of knowledge or skill in effecting a desired result.

Nevertheless, the criticism that industrial arts fails to promote creative attitudes in its students because it does not give enough attention to original design and to the esthetic is acceptable. However, it is narrow, because it criticizes only a part of a question much larger in scope. This larger question asks whether industrial arts is encouraging a creative approach in the solving of *all* kinds of problem situations which arise, or should be caused to arise, in the educational experiences of the student.

The process of embodying an idea in some material allows opportunity for a

sequence of smaller problem situations each demanding a measure of creative effort for its solution. These many smaller solutions may be physical objects with no esthetic qualities at all. They may be only ingenious devices for accomplishing some technical task in a novel way and thus make their small contribution to the completion of the object under construction. For example, how does one hold two irregularly shaped pieces of wood for gluing? How are the problems associated with the drilling of a hole in the side of a round bar of steel to be solved? For the student these can be challenging situations. The important point to be noted is that opportunity is present for acting creatively.

The esthetic barrenness of the industrial arts project is a criticism too narrow, yet acceptable as a small voice supporting a more inclusive campaign. This broader campaign seeks to remove from industrial education some of the regimentation, the teacher-imposed patterns of action; the thwarting of the safe exercise of curiosity and adventure-some investigation, and the failure to allow for pupil initiative, resourcefulness, and unorthodox thinking in problem situations.

When industrial arts educators think in terms of creative teaching and creative learning, they must include more than a new emphasis upon industrial design. From one philosophical point of view every solution to a new problem is the result of a creative effort, for every problem is different in some aspect from any that has preceded it. Therefore, any solution to a problem is unique, and to arrive at the solution requires a new combination and treatment of appropriate data. This is true of design, but it is equally true that the many technical problems of the school shops can, if the teacher is enlightened and skillful, be just as demanding of creative effort for their solutions.

To encourage original design and then dictate solutions to construction problems is no better than dictating design. However, in anticipation of disagreement with this statement, it must be

pointed out that certain technical processes are standardized and must be taught with exactness for the same reason that we teach the correct spelling of word or the fundamental mathematical processes. Before one can construct, and indeed before one can design, he must have some familiarity with the characteristics of materials and with the possibilities of the tools he has at his command.

The chief values of encouraging creative design work do not lie within the object created even though this is often put on display and exploited for its publicity value. In all of its beauty and excellence it may even be a noteworthy contribution to the total of

man's accomplishments, but evaluation of the educational process is concerned with the changes in the student. While a physical object of good design and workmanship provides evidence, the degree of goodness can be determined only in relation to the educational development of the student who did the work. It is conceivable, indeed it is directly verifiable through teacher experience, that a piece of work considered very ordinary by adult standards might represent a real, meaningful, and developmental experience for the student involved. Furthermore, if the student only restudies and therefore, in a sense, recreates a plan he has found in a book, the resulting product might easily have

demanding worthwhile educational activity

Educational criteria do not require that solutions to problems be new discovery or original additions as an expert adult would judge them. It is valuable when they seem to be so to the student, for they must first of all be evaluated from the pupil's point of view. For industrial arts education the real values are the changes in the student who now has a little more ability, and a little more confidence in his ability, to approach a problem situation, design or technical, to struggle with it, to call upon past experience for data or to seek new data, and eventually to propose a solution and to act upon it.

Problems Facing the Professional Educator

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and equipment are not a luxury but a necessity.

Securing enough adequately prepared teachers. Because of the increased enrollments when the elementary and secondary schools opened their doors in September, 1957, there was a shortage of about 135,000 qualified teachers. We are told that about 88 per cent of the colleges and universities cite a serious shortage of teachers also. If the proportion of college-age students who attend college remains constant, 300,000 to 350,000 college teachers will be required by 1970. This amounts to an increase of approximately 150,000 over the present number employed. Teachers colleges and departments of education are unable to recruit enough candidates for training to meet these needs. It is not likely that the additional personnel needed for teaching will be attracted to the profession with teachers' salaries what they are today. This is a serious problem which the professional educator, alone, cannot solve.

Effects of Technology

A second great force to which the professional educator must respond is the explosive development of technology during these last few decades. The professional educator must realize that the task of preparing children and youth in the middle of the twentieth century is more demanding than it has ever been if we are to bridge the gap between our technology and our social institutions.

Demand on physical sciences. Technology has illuminated the value of the physical sciences as a means for studying the universe and using its forces for the purposes of man. Herein lies one of the greatest challenges as well as one of the great dangers facing education.

The challenge to prepare more physicists, mathematicians, chemists, engineers, and other technical workers must be met. However, there is a danger of the profession being stampeded into a crash program which would lose sight of other important phases of life. It is equally imperative—and some would say more so—that there also be renewed emphasis upon the human dis-

ciplines from which man learns to know himself. We must not forget that these times call for more, not less, emphasis upon the communication arts and the social sciences.

In November, 1957, Vice President Nixon spoke to this point when he addressed members of the American Council on Education:

I think that it is essential that we not make the mistake at this time of going overboard in developing or in putting emphasis on scientific sciences and other fields. I say this because the greatest mistake we could make would be to become simply a pale carbon copy of the scientific materialism which the Soviet Union represents in the world today. We have something other to offer than simply leadership in the field of science. We must not be behind in that field, but we also have to train leaders in government, leaders in business, leaders in the social sciences. Certainly any program which the government does undertake, it seems to me, should take into account the necessity for an overall approach rather than one where it is limited exclusively to this particular area.

Educating for leisure. Educating for leisure is not a new problem, but the rate of change brought on by recent

technological developments has re-emphasized its significance.

By the middle of this century, one man using the power-driven equipment available could do as much work in 40 hours as three men working 70 hours could do with the tools available at the middle of the past century. Most of this gain has been achieved since 1900. The great rise since 1940 has been phenomenal. There is every reason to believe that as time goes on man will be freed more and more from the hours he will need to work at making his living. To what uses will this new leisure be put? This will be determined by the tastes

and interests of the people. Professional educators must find ways of placing in perspective the good things of our culture and must build within children and youth a sensitivity to what is excellent.

Need for more sound research. Large problems in education are often best solved by using research to find specific answers to some of the smaller component problems. We have had good research in education, but not enough. There are yet a great many unanswered questions which need further study. With the growing public concern with the methods and the achievements of

education, it is more important that financial help be enlisted to sponsor research in this field.

We have in this brief account, mentioned two major problems facing the professional educator. They are so all-encompassing and so complex that thus far our attack on them has been considerably short of the success we must have. The professional educator cannot be expected to solve these problems alone. Nonetheless he will be expected to provide the leadership. This is the challenge he must face. He should regard it as a high privilege.

Abstract of Thesis

La Follette, Mary Edna. **Budgeting the Finances of Small High School Libraries.** August, 1957. 70 pp. No. 777.

Problem. The purpose of this study was to survey small secondary school library standards with reference to anticipated incomes for budgetary procedures. It was thought that a study such as this would stimulate other teacher-librarians to estimate their library budgets.

Method. The questionnaire method was basic in the approach to this problem. Questionnaires were sent to all forty-eight State Departments of Education. Forty-three, or approximately ninety per cent, of the states returned either the questionnaire or other pertinent materials.

Findings. Standards for small secondary school libraries rank equally with those schools having larger enrollment figures on a per pupil basis. Specifications for the purchase of library materials are clearly defined. The materials for purchase are described and listed. Recommendations to increase per pupil appropriations are indications of greater interest in values placed on broader library experiences. The geographical spread of libraries developing into materials centers has fanned north and westward from Florida to Washington. However, operational funds for audio-visual materials are not included in the per pupil appropriation plan. An awakening to the need for more time to be allocated to the teacher-librarian for library activities exists. In most states higher educational qualifications are required, although, in a few areas, a li-

brarian need not have more extensive training than an accredited teacher.

Since budgeting practices are relatively new in public schools, library budgeting has not yet reached the stage of widespread practice. By using the procedures for preparing a school budget around its educational plan, the library budget can be estimated on the same basis, and included as an integral part of the required school document for local and/or state acceptance. Fiscal control of library expenditures is essential to the administration of a school in which it functions, to the youth whom it serves, and to the community in which it operates.

Committee

Mr. Marino, Chairman

Dr. Swalls

Miss Weller

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